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FOLEY & LARDNER LLP 321 NORTH CLARK STREET SUITE 2800 CHICAGO, IL 60610-4764			LEE, RICHARD J	
			ART UNIT	PAPER NUMBER
			2621	

DATE MAILED: 06/05/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/854,461

Applicant(s)

HANNUKSELA ET AL.

Examiner

Richard Lee

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 March 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,4-6,9-12,14-22,24-33,35-45,47-54 and 56-63 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,4-6,9-12,14-22,24-33,35-45,47-54 and 56-63 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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1. The request filed on March 9, 2006 for a Request for Continued Examination (RCE) is acceptable and a RCE has been established. An action on the RCE follows.
2. Upon further search and consideration, the following new grounds of rejections are deemed appropriate. The Examiner apologizes for any inconvenience that this may have caused for the applicants. Further, the applicants' arguments from the amendment filed March 9, 2006 have been noted and considered, but are deemed moot in view of the new grounds of rejection.
3. Claims 4, 24, 35, 47, 51, and 56 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

For examples:

- (1) claim 4, line 1, the phrase "according to claim" as claimed renders the claim indefinite since it is uncertain whether claim 4 is an independent claim or dependent claim;
- (2) claim 24, line 3, the phrase "can be", as claimed does not show positive recitation and as such renders the claim vague and indefinite. Suggestion: change "can be" to "is";
- (3) claim 35, line 4, lines 6-7, "the predetermined criterion" shows no clear antecedent basis, respectively;
- (4) claim 47 depends from canceled claim 46 and as such renders the claim indefinite;
- (5) claim 51, line 2, "can" should be deleted for clarity; and
- (6) claim 56, line 4, the phrase "can be" as claimed does not show positive recitation and as such renders the claim vague and indefinite. Suggestion: change "can be" to "is".

4. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

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5. Claims 54, and 56-63 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claim 54 recites a signal claim per se, showing no practical application and as such does not fall within the statutory classes set forth in 35 U.S.C. 101. Even though claim 54 has been amended to include a “video decoder”, the preamble still calls for a signal claim and there is no sufficient structure by itself or in combination with the signal claimed showing any practical application. Further, the conditions set forth by the video decoder as claimed does not show positive recitation to overcome the signal claim. And since dependent claims 56-63 are directed to further limitations showing no practical application, claims 54-63 as a whole does not fall within the statutory classes set forth in 35 U.S.C. 101.

6. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the “right to exclude” granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

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7. Claims 10 and 14 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1 and 8 of copending Application No. 10/138,178. Although the conflicting claims are not identical, they are not patentably distinct from each other because claim 10 recites a “the predictive coder being arranged to form a prediction of at least part of a current picture of the sequence from a default reference picture for the current picture”, while claim 8 of ‘178 recites “form a temporal prediction for a current picture of the sequence or a part thereof from a first reference picture or a part thereof”. These differences are not patentably distinct from each other since, in view of the Specification, the prediction recited in claim 10 is essentially the same as the temporal prediction of claim 8 of ‘178. Though “a default reference picture” is recited in claim 10 and “first reference picture” is recited in claim 8 of ‘178, this difference is not patentably distinct from each other since the two reference pictures performs the same function within the prediction claimed. Though claim 10 recites “identifying a further picture of the sequence that is to be used by a video decoder as an alternative reference picture for the current picture or said part of the current picture when the video decoder is unable to decode the default reference picture” and claim 8 of ‘178 recites “indicate a second reference picture or a part thereof with the current picture for forming an alternative temporal prediction for the current picture or said part thereof, said second reference picture or said part thereof to be used by a video decoder apparatus as an alternative reference for the current picture or said part thereof when the video decoder is unable to decode the first reference picture or said part thereof”, such differences are not patentably distinct from each other since the “further picture” of claim 10 and “second reference picture” of claim 8 of ‘178 provides the same identification to be used by the video decoder as an alternative reference

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picture. Claim 14 recites “forming a prediction of at least part of a current picture of the sequence from a default reference picture for the current picture” while claim 1 of ‘178 recites “forming a temporal prediction for a current picture of the sequence or a part thereof from a first reference picture or a part thereof”. These differences are not patentably distinct from each other since, in view of the Specification, the prediction recited in claim 14 is essentially the same as the temporal prediction of claim 1 of ‘178. Though “a default reference picture” is recited in claim 10 and “first reference picture” is recited in claim 8 of ‘178, this difference is not patentably distinct from each other since the two reference pictures performs the same function within the prediction claimed. Claim 14 recites “the indicator for identifying a further picture of the sequence that is to be used by a video decoder as an alternative reference picture for the current picture or said part of the current picture when the video decoder is unable to decode the default reference picture” while claim 1 of ‘178 recites “indicating a second reference picture or a part thereof for forming an alternative temporal prediction for the current picture or said part thereof, said second reference picture or said part thereof to be used by a video decoder apparatus as an alternative reference for the current picture or said part thereof when the video decoder is unable to decode the first reference picture or said part thereof”. Such differences are not patentably distinct from each other since the “further picture” of claim 14 and “second reference picture” of claim 1 of ‘178 provides the same identification to be used by the video decoder as an alternative reference picture.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

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8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

9. Claims 9-11, 14, 16, 22, 28, 39, 45, 51, 53, 54, and 60 are rejected under 35

U.S.C. 102(e) as being anticipated by Fukunaga et al (6,438,165).

Fukunaga et al discloses a picture transmission system using minimal reference frame modification to recover from transmission errors as shown in Figures 4 and 5, and the same method of encoding a video signal representing a sequence of pictures to form an encoded video signal, multimedia terminal device including at least one of a video encoder for forming an encoded video signal and a video decoder, video encoder for forming an encoded video signal, and an encoded video signal representing a sequence of pictures (see Figure 4) as claimed in claims 10, 14, 16, 22, 39, 45, 51, 53, 54, and 60, comprising the same input (i.e., 101 of Figure 4) for receiving a video signal representing a sequence of pictures (see column 4, lines 18-22), and a predictive coder (i.e., within 102 of Figure 4, see column 4, lines 23-36), the predictive coder being arranged to form a prediction of at least part of a current picture of the sequence from a default reference picture for the current picture (i.e., in interframe coding, coding unit 102 codes a block with reference to the corresponding block and/or one or more neighboring blocks in the preceding frame, the corresponding block and/or neighboring blocks representing the default reference picture, see column 4, lines 23-36); the encoder being arranged to provide an indicator (i.e., as provided by 107 of Figure 4, see column 5, lines 1-40) for the current picture or a part of

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the current picture identifying a further reference picture (i.e., a corresponding block in the preceding frame is used as a replacement for the error frame in the decoding, the corresponding block representing the further reference picture, see column 5, lines 1-21) of the sequence that is to be used by a video decoder as an alternative reference picture for the current picture or the part of the current picture when the video decoder is unable to decode the default reference picture (see column 4, line 61 to column 5, line 40); and the indicator identifying the further picture of the sequence that is to be used as an alternative reference picture for the current picture or the part of the current picture indicates the temporal reference of the further picture, wherein the indicator is provided with the current picture or part of the current picture, wherein the video encoder is arranged to use the temporal reference of the further picture as the indicator identifying a further picture as a picture of the sequence that is to be used as an alternative reference picture for the current picture or the part of the current picture (see column 4, lines 23-36, column 5, lines 1-40).

Fukunaga et al shows the same method of decoding an encoded video signal representing a sequence of pictures and video decoder, and multimedia terminal device as claimed in claims 9, 11, 28, 51, and 53, comprising the same input (i.e., 201 of Figure 5) for receiving an encoded video signal representing a sequence of pictures, the encoded video signal having been encoded by forming a prediction of at least part of a current picture from a default reference picture for the current picture (see column 4, lines 23-36) and providing an indicator (i.e., 107 of Figure 4) for the current picture or a part of the current picture, the indicator identifying a further picture of the sequence that is to be used by the video decoder as an alternative reference picture for the current picture or the part of the current picture when the video decoder is unable to decode the

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default reference picture (see column 4, line 61 to column 5, line 40), the decoder being arranged to receive a part of the encoded video signal representing the current picture wherein, when the decoder is unable to decode the default reference picture for the current picture, the decoder is arranged to examine the indicator provided for the current picture or the part of the current picture and to decode the current picture or the part of the current picture with reference to the alternative reference picture identified by the indicator (see column 5, line 42 to column 6, line 47); the indicator identifying a further picture as a picture of the sequence that is to be used as an alternative reference picture for the current picture or the part of the current picture indicates the temporal reference of the further picture (see column 4, lines 23-36, column 5, lines 1-40).

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 1, 19, 24, 32, 35, 42, and 56 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fukunaga et al as applied to claims 9-11, 14, 16, 22, 28, 39, 45, 51, 53, 54, and 60 in the above paragraph (9), and further in view of Hurst of record (6,188,728).

Fukunaga et al discloses substantially the same method of encoding a video signal representing a sequence of pictures to form an encoded video signal, multimedia terminal device including at least one of a video encoder for forming an encoded video signal and a video decoder, video encoder for forming an encoded video signal, an encoded video signal representing a sequence of pictures, method of decoding an encoded video signal representing a sequence of pictures and video decoder as above, further including examining more than one

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indicator (i.e. as provided by 107 of Figure 4) provided for the current picture or the part of the current picture, each of the more than one indicator identifying a further picture of the sequence that can be used as an alternative reference picture for the current picture or the part of the current picture when the video decoder is unable to decode the default reference picture, wherein more than one indicator is provided for the current picture or part of the current picture (see column 4, line 61 to column 5, line 40); wherein the video encoder is further arranged to compare at least part of the default reference picture or the current picture with a plurality of further pictures, to output an indicator for each further picture that meets the predetermined criterion thereby to provide more than one indicator for the current picture or the part of the current picture

Fukunaga et al does not particularly disclose the followings:

(a) identifying the further picture of the sequence that is to be used as an alternative reference picture for the current picture or the part of the current picture by comparing at least part of the default reference picture or the current picture with at least one further picture of the sequence to calculate a measure of similarity between the default reference picture or the current picture and each of the at least one further picture and, if the measure of similarity calculated using a particular further picture meets a predetermined criterion, outputting an indicator identifying the particular further picture as a picture of the sequence that is to be used as an alternative reference picture for the current picture or the part of the current picture, wherein the measure of similarity is a sum of absolute differences calculated using differences in pixel values between the default reference picture and a further picture, and wherein the video encoder is arranged to determine the measure of similarity as a sum of absolute differences calculated using

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differences in pixel values between the default reference picture and a further picture as claimed in claims 1, 19, 32, and 42; and

(b) the indicators are ordered in the encoded video signal according to rank, the indicator identifying the picture having the closest similarity to the default reference picture or current picture being first in the order of rank, the decoding method further comprising using the further pictures identified by the indicators as alternative reference pictures for the current picture or the part of the current picture in order of rank; the video encoder is arranged to rank the further pictures that meet the predetermined criterion and provide their associated indicators with the current picture or the part of the current picture in order of rank, the further picture having the closest similarity to the default reference picture or current picture being placed first; the indicators are included in the encoded video signal according to an order of rank, the indicator identifying the picture having the closest similarity to the default reference picture or current picture being first in the order of rank as claimed in claims 24, 35, and 56.

Regarding (a) and (b), Hurst discloses a block motion video coding and decoding as shown in Figures 1-3, and teaches the conventional use of a sum of absolute pixel difference similarity measure for a plurality of reference blocks in order to identify the reference block that most closely matches the current block of image data (see column 4, lines 26-46). Since Hurst has the capability of distinguishing between the various references blocks to determine the most closely matched block, it is hence considered obvious there is some sort of ranking factor within the block matching to rank the similarity measures obtained so as to identify the one or ones that match the current block the closest and so that the closest similarity is ranked first in the order of ranking. Therefore, it would have been obvious to one of ordinary skill in the art, having the

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Fukunaga et al and Hurst references in front of him/her and the general knowledge of block matching techniques through similarity measures, would have had no difficulty in providing a ranking of the plurality of reference pictures according to a sum of absolute pixel difference similarity measurements as taught by Hurst as part of the motion estimation within Fukunaga et al for the same well known identification by rank of the closest matched reference blocks first in the order of rank for the current block purposes as claimed.

12. Claims 5, 15, 25, 26, 36, 37, 48, 49, 57, and 58 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fukunaga et al as applied to claims 9-11, 14, 16, 22, 28, 39, 45, 51, 53, 54, and 60 in the above paragraph (9), and further in view of Sun et al of record (5,455,629).

Fukunaga et al discloses substantially the same method of encoding a video signal representing a sequence of pictures to form an encoded video signal, multimedia terminal device including at least one of a video encoder for forming an encoded video signal and a video decoder, video encoder for forming an encoded video signal, an encoded video signal representing a sequence of pictures, method of decoding an encoded video signal representing a sequence of pictures and video decoder as above, but does not particularly disclose wherein the video encoder is arranged to include the indicator in a picture header of the encoded video signal, wherein if the indicator is provided for a part of the current frame, the video encoder is arranged to include the indicator in a picture segment header or a macroblock header of the encoded video signal, the video decoder is arranged to obtain the indicator from a picture header of the encoded video signal, the video decoder is arranged to obtain the indicator from a picture segment header or a macroblock header of the encoded video signal as claimed in claims 5, 15, 25, 26, 36, 37, 48, 49, 57, and 58. The particular use of picture headers for including indicators are however

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old and well recognized in the art, as exemplified by Sun et al (see column 2, line 33 to column 3, line 4, column 8, line 65 to column 9, line 32). Therefore, it would have been obvious to one of ordinary skill in the art, having the Fukunaga et al and Sun et al references in front of him/her and the general knowledge of picture header data, would have had no difficulty in providing the picture header formatting including the indicator as taught by Sun et al for the video encoder of Fukunaga et al for the same well known compliance with the MPEG protocol and so that the receiving decoder may properly decode the video data purposes as claimed.

13. Claims 6, 27, 38, 50, and 59 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fukunaga et al as applied to claims 9-11, 14, 16, 22, 28, 39, 45, 51, 53, 54, and 60 in the above paragraph (9), and further in view of ITU-Telecommunications Standardization Sector (Proposed Draft of modified Annex L including Copyright, normative Error Concealment, and Exact IDCT Signaling) of record.

Fukunaga et al discloses substantially the same method of encoding a video signal representing a sequence of pictures to form an encoded video signal, multimedia terminal device including at least one of a video encoder for forming an encoded video signal and a video decoder, video encoder for forming an encoded video signal, an encoded video signal representing a sequence of pictures, method of decoding an encoded video signal representing a sequence of pictures and video decoder as above, but does not particularly disclose wherein the sequence of video pictures is encoded according to the H.263 video compression standard and the video encoder is arranged to include the indicator in supplemental enhancement information in accordance with the HY.263 video compression standard, wherein the video decoder is arranged to obtain the indicator from supplemental enhancement information of a video sequence

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encoded according to the H.263 video compression standard as claimed in claims 6, 27, 38, 50, and 59. Such technical features are however well known and made obvious by ITU-Telecommunications Standardization Sector (see version 3 extensions, pages 1-5). Therefore, it would have been obvious to one of ordinary skill in the art, having the Fukunaga et al and ITU-Telecommunications Standardization Sector references in front of him/her and the general knowledge of video compression standards and recommendations, would have had no difficulty in providing the H.263 recommendation with Supplemental Enhancement Information as taught by the ITU-Telecommunications Standardization Sector reference for the video coder of Fukunaga et al so that the video signal encoded by Fukunaga et al may be encoded according to the H.263 recommendation and the indicator of Fukunaga et al may be included in the Supplemental Enhancement Information for the same well known compliance with the MPEG standard purposes as claimed.

14. Claims 2, 17, 18, 29, 30, 33, 40, 41, 61, and 62 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fukunaga et al as applied to claims 9-11, 14, 16, 22, 28, 39, 45, 51, 53, 54, and 60 in the above paragraph (9), and further in view of Yagasaki of record (5,515,388).

Fukunaga et al discloses substantially the same method of encoding a video signal representing a sequence of pictures to form an encoded video signal, multimedia terminal device including at least one of a video encoder for forming an encoded video signal and a video decoder, video encoder for forming an encoded video signal, an encoded video signal representing a sequence of pictures, method of decoding an encoded video signal representing a sequence of pictures and video decoder as above, further including wherein the encoder is arranged to compare at least part of the first default reference picture or the current picture with

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at least one further picture of the sequence occurring temporally before the current picture with at least one further picture of the sequence occurring temporally before the current picture to calculate a measure of similarity between the default reference picture or the current reference picture and each of the at least one further picture, and if the measure of similarity calculated using a particular further picture meets a predetermined criterion, to output an indicator identifying the particular further picture as a picture of the sequence that is to be used as an alternative reference picture for the current picture or the part of the current picture (i.e., interframe coding within 102 of Figure 4, see column 3, lines 47-60, column 4, lines 23-36, column 4, line 61 to column 5, line 41).

Fukunaga et al does not particularly disclose, though, wherein the predictive coder is arranged to form a prediction of at least part of the current picture from a first default reference picture and a second default reference picture for the current picture, the first default reference picture occurring temporally before the current picture and the second default reference picture occurring temporally after the current picture, wherein the video encoder is arranged to provide alternative reference pictures for B pictures and P pictures, wherein the video encoder is arranged to provide alternative reference pictures only for P pictures as claimed in claim 2, 17, 18, 29, 30, 33, 40, 41, 61, and 62. However, Yagasaki discloses an apparatus and method for preventing repetitive random errors in transform coefficients as shown in Figure 1, and teaches the conventional use of reference frames temporally before and after the current frame for predicting a current B frame (i.e., B frame prediction, see column 4, lines 45-53), and the particular P frame predictions (see column 4, lines 41-44). It is considered obvious to provide the B and P current frame predictions from Yagasaki as the specific current picture predictions

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within Fukunaga et al. Having provided the B and P current frame predictions of Yagasaki within Fukunaga et al, and since Fukunaga et al teaches the particular use of alternative reference pictures for current pictures (see column 4, line 61 to column 5, line 40 of Fukunaga et al), the video encoder of Fukunaga et al may therefore obviously be arranged to provide alternative reference pictures for B pictures and P pictures, and arranged to provide alternative reference pictures only for P pictures as claimed. Therefore, it would have been obvious to one of ordinary skill in the art, having the Fukunaga et al and Yagasaki references in front of him/her and the general knowledge of B and P frame predictions within video encoders, would have had no difficulty in providing the B and P current frame predictions of Yagasaki within Fukunaga et al also that the video encoder of Fukunaga et al may be arranged to provide alternative reference pictures for B pictures and P pictures, and arranged to provide alternative reference pictures only for P pictures for the same well known B and P picture predictive processing purposes as claimed.

15. Claims 12, 21, 31, 44, 52, and 63 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fukunaga et al as applied to claims 9-11, 14, 16, 22, 28, 39, 45, 51, 53, 54, and 60 in the above paragraph (9), and further in view of Yamaguchi et al of record (US 2002/0009141 A1).

Fukunaga et al discloses substantially the same method of encoding a video signal representing a sequence of pictures to form an encoded video signal, multimedia terminal device including at least one of a video encoder for forming an encoded video signal and a video decoder, video encoder for forming an encoded video signal, an encoded video signal representing a sequence of pictures, method of decoding an encoded video signal representing a

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sequence of pictures and video decoder as above, but does not particularly disclose a radio telecommunications device and wherein the video encoder is arranged to encode the video signal as a scalable video sequence and to provide alternative reference pictures for predictively encoded enhancement layer pictures of the scalable video sequence, the video decoder is arranged to decode a scalably encoded video sequence in which alternative reference pictures are provided for predictively encoded enhancement layer pictures of the scalably encoded video sequence as claimed in claims 12, 21, 31, 44, 52, and 63. However, Yamaguchi et al discloses a video encoding and decoding apparatus as shown in Figures 1-4, and teaches the conventional radio communication means for the transmission and reception of compressed video data (see Figure 15A, page 19, sections [0289], [0291], [0293], [0294]) as well as the scalable video codings and decodings, and enhancement layer video codings and decodings (see sections [0008] to [0012], [0039], [0040]). Therefore, it would have been obvious to one of ordinary skill in the art, having the Fukunaga et al and Yamaguchi et al references in front of him/her and the general knowledge of video codings and decodings, and transmission of video compressed data, would have had no difficulty in providing the radio communication means of Yamaguchi et al as the specific means for transmitting the video data of Fukunaga et al to a video decoder as well as the scalable and enhancement video codings and decodings as taught by Yamaguchi et al within the video coder of Fukunaga et al so that the video encoder of Fukunaga et al may be arranged to encode the video signal as a scalable video sequence and to provide alternative reference pictures for predictively encoded enhancement layer pictures of the scalable video sequence, and so that the video decoder of Fukunaga may perform the complementary scalable and enhancement video decodings for the same well known compliance with the MPEG standard purposes as claimed.

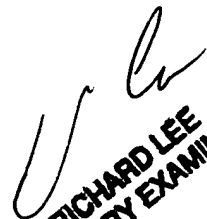
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16. Claims 20 and 43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fukunaga et al and Hurst as applied to claims 1, 9-11, 14, 16, 19, 22, 24, 28, 32, 35, 39, 42, 45, 51, 53, 54, 56, and 60 in the above paragraphs (9) and (11), and further in view of Normile of record (6,438,165).

The combination of Fukunaga et al and Hurst discloses substantially the same method of encoding a video signal representing a sequence of pictures to form an encoded video signal, multimedia terminal device including at least one of a video encoder for forming an encoded video signal and a video decoder, video encoder for forming an encoded video signal, an encoded video signal representing a sequence of pictures, method of decoding an encoded video signal representing a sequence of pictures and video decoder as above, but does not particularly disclose wherein the video encoder is arranged to assess the similarity between the default reference picture and a further picture using picture histograms as claimed in claims 20 and 43. Such technical features are however made obvious in view of Normile (see column 6, lines 5-67). Therefore, it would have been obvious to one of ordinary skill in the art, having the references in front of him/her and the general knowledge of the comparison of current and reference frames for similar matches within video encoders, would have had no difficulty in providing the picture histograms of Normile for the similarity matching within Fukunaga et al so that the video encoder of Fukunaga et al may be arranged to assess the similarity between the default reference picture and a further picture within Fukunaga et al for the same well known prediction of video frames purposes as claimed.

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17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Richard Lee whose telephone number is (571) 272-7333. The Examiner can normally be reached on Monday to Friday from 8:00 a.m. to 5:30 p.m, with alternate Fridays off.


RICHARD LEE
PRIMARY EXAMINER

Richard Lee/rl

5/26/06

